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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,691	11/14/2003	Jurgen Herre	S&ZFH020501	2921
24131	7590	04/19/2005	EXAMINER	
LERNER AND GREENBERG, PA			WARREN, DAVID S	
P O BOX 2480			ART UNIT	
HOLLYWOOD, FL 33022-2480			PAPER NUMBER	
			2837	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/713,691	<b>Applicant(s)</b> HERRE ET AL.	
	<b>Examiner</b> David S. Warren	<b>Art Unit</b> 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 is/are allowed.
- 6) ☒ Claim(s) 1 and 7 is/are rejected.
- 7) ☐ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/14/03 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/14/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 7, 8, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The term "reduced" in claims 1 and 7 is a relative term which renders the claim indefinite. The term "reduced" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Clarification is required. In claims 1, 7, 8, and 10, it is not clear as to what is meant by "integer fraction" – this appears to be an oxymoron. Clarification is required. In claims 8 and 10, the term "forged" has been interpreted by the Examiner to mean "formed," it this is incorrect, please clarify. The Examiner notes that claims 9 and 11 use the phrase "integer factor" which is clearly interpreted.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Scheirer ("Pulse Tracking with a Pitch Tracker." 1997. MIT Media Laboratory).

Regarding claims 1 and 7, Scheirer discloses the use of a means for dividing an audio input signal into at least two sub-bands (see fig. 2, second page; **Note:** pages unnumbered) by the use of band pass filters, means of examining the sub-bands with regard to periodicity by an autocorrelation function (fig. 2; page 3, first column, first paragraph), and post-processing the rhythm information to "reduce" ambiguity (the Examiner interprets Scheirer's "clear peak...at lag 0.6 seconds" to imply a reduced ambiguity). As the Applicant acknowledges (specification, page 6, lines 1 – 15), ambiguity will be reduced when an audio signal with a strong rhythmic signature is analyzed (as opposed to, say, a solo vocal melody). Scheirer also discloses a signal portion added at an "integer fraction" of a delay (Scheirer's "lag" is equivalent to Applicant's "delay"), i.e., Scheirer states: "We also see peaks at fractions of this period, which correspond to the faster rhythmic divisions in the signal... as well as multiples of

the fractions" (page 3, col. 1, second paragraph, penultimate sentence). Finally, Scheirer discloses the use of plural bands to "establish rhythm information."

***Allowable Subject Matter***

6. Claims 8 and 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 8 and 10, the prior art does not disclose the use of examining the periodicity within an audio signal wherein post-processed raw-information for the audio signal is obtained by adding a version of the rhythm raw-information forged ("forged" is interpreted as "formed") by an integer factor so that a signal portion is added at an integer fraction of a delay to an autocorrelation function peak is associated.

7. Claim 9 and 11 are allowed. Regarding claims 9 and 11, the prior art does not disclose the use of subtracting a version of the rhythm raw-information weighted by a factor unequal to one and spread by an integer factor larger than one.

8. Claims 2 – 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding claims 2 and 4, the prior art does not disclose spreading rhythm raw-information signal by an integer factor, nor compressing by an integer factor larger than one. Regarding claim 6, the prior art does not disclose evaluating the quality by the use of a significance measure (wherein means for establishing rhythm information by considering the significance measure).

**Conclusion**

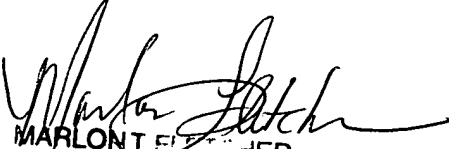
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The document to Weare et al. (20004/0060426) is considered to be of interest regarding autocorrelation functions and audio analysis.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 571-272-2076. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dsw

  
MARLON F. FISHER  
PRIMARY EXAMINER